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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,533	09/30/2003	Hany M. Fahmy	42P17743	8328

7590 01/10/2006  
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EXAMINER
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DINH, SON T

ART UNIT	PAPER NUMBER
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2824

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

4A

<b>Office Action Summary</b>	<b>Application No.</b> 10/676,533	<b>Applicant(s)</b> FAHMY ET AL.	
	<b>Examiner</b> Son T. Dinh	<b>Art Unit</b> 2824	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 11-14 and 24-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10, 15 and 17-23 is/are rejected.
- 7) ☒ Claim(s) 7 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>East search history</u> .              |

### **DETAILED ACTION**

The election filed on 9/21/05 has been entered.

The election of Group I (claims 1-10 and 15-23 have been acknowledged.

Claims 11-14 and 24-26 are withdrawn from consideration in view of the election.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Tamura et al (U.S. Patent No 6,157,688).

With respect to claim 1, figure 7 of Tamura et al discloses a memory interface comprising an inductor (214), a plurality of transmission lines (215, 222), coupled to the inductor 214 in series (214 and 215 are in series), to couple a plurality of memory device (261, 262) to a circuit board (inherently includes in Tamura et al).

Regarding claim 2, 214 (figure 7) would be considered as one impedance transformer.

Regarding claim 3, the transmission line 215 is used as one impedance transformer.

Regarding claim 5, the step of coupling the plurality of memory device (261, 262) is performed by the transmission line 215 and 222, and such circuit includes inductor 214 as shown in figure 7.

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Regarding claim 6, the controller 161 in figure 1 of Tamura is memory controller.

Regarding claim 8, the inductor 214 is in series with the transmission line 215 (figure 7).

Regarding claim 9, the applicant is referred to the rejection applied to claim 3 for the reasons of this rejection.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 15, 17-21, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Greff et al (U.S. Patent No 6,745,268).

Regarding claim 15, figure 5 of Greff et al discloses a system comprising a plurality of SDRAM (300A, 300B), a memory controller (200), a memory interface (106A), an inductor that coupled in series with a transmission line (claim 3 of Greff discloses an inductor connected in series with a transmission line).

Regarding claim 17, claim 3 of Greff et al inherently discloses that the transmission line includes impedance transformer.

Regarding claim 18, a processor is inherently included in Greff et al, since every memory device must have a processor so as to control the operation of the memory device.

Regarding claim 19, column 4, lines 55-58 discloses that the SDRAM is a DDR SDRAM.

Regarding claims 20, 21 and 23, the inductor that is disclosed in claim 3 of Greff et al is clearly an impedance transformer. The applicant is also referred to the rejection applied to claim 15 for the reasons of this rejection.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura et al (applied to claims 4 and 10 of the instant application) and Greff et al (applied to claim 22 of the instant application claim 22).

The only difference between Tamura et al and Greff et al and claims 4, 10 and 22 is that Tamura et al and Greff et al fail to disclose a SDRAM that operates at a frequency above 200MHz. However, it would have been obvious matter of design choice by routine experimentation and optimization to choose these particular operating frequency because the applicant has not disclosed that such operating frequency are for a particular unobvious purpose, produce an unexpected result.

***Allowable Subject Matter***

Claims 7 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fail to teach or suggest a connection of an inductor and a resistor in series with a transmission line that connected between a controller and a memory device.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

-Shibata et al disclose a memory device having an inductor and a transmission line.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son T. Dinh whose telephone number is 571-272-1868. The examiner can normally be reached on Monday to Friday 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on 571-272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Dinh  
January 8, 2006



Son T. Dinh  
Primary Examiner